

10 However, hitherto, the devices of this type have still
not been satisfactory either. They also lead to not
insignificant shocks and to risks of pollution
following the escape of the gases originating from the
pyrotechnic generator.

15 Solutions based on expanding pyrotechnic tubes filled
with explosive and placed against the structure to be
ruptured, near to a line of weakness formed therein,
have also been proposed.

20 On this point, reference may be made for example to
document FR-A-2 619 738.

25 This solution is not entirely satisfactory either. This
is because it actually leads to a shock level which is
too high for certain applications.

30 Document DE-19604410 describes a device comprising a
structure placed in tension between two support
elements, and a rupture device associated with this
structure in tension so as to rupture the latter on
demand.

35 In an attempt to improve the situation, present-day
studies are tending toward the use of a damper coupled
to the cutting device in order to limit the level of
mechanical stress applied to the equipment that is to
be released.

It is an object of the present invention to propose a new device designed to allow the rupture of a structure forming a tie operating in tension and holding a system, which device is designed to limit the mechanical stress applied to the system at the time of the rupture of the tie, particularly to limit the vibration transmitted to the system.

Another auxiliary object of the present invention is to propose a rupture device of a structure avoiding any pollution of the environment.

These objects are achieved in the context of the present invention by virtue of a device as defined in the appended claim 1.

As a preference, this device for the controlled rupture of fibers, particularly pretensioned fibers, is characterized in that it comprises two stressing members arranged one on each side of the fibers, and operating means designed to, on demand, bring about a relative displacement toward each other of the stressing members, the latter being shaped so that, as they move closer together, they impose on the fibers a radius of curvature that is below the threshold of curvature thereof that leads to rupture in bending.